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EXAMINER
NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 July 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>6-9 and 20-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>6-9 and 20-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>07/18/08</u>

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

DETAILED ACTION

This is response to amendment filed 07/18/08.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 07/18/08 are being

considered by the examiner.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new

ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

Claims 6, 7 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated

by Buyya et al. "A Deadline and Budget Constrained Cost time Optimisation Algorithm

for Scheduling task Farming Applications on Global Grids", School of computer Science

and Software Engineering, Monash University, Caulfield Campus, Melbourne,

Australia, 2002. (http://www.csse.monash.edu.au/~davida/papers/pdpta02.pdf).

Regarding claims 6 and 20, Buyya discloses: A computer implemented method for

managing access to the computer resources and a computer-implemented method for use in a

networked environment including a grid of computing resources, and a request manager of the

grid to receive requests of one or more customers for utilization of computing resources of the

grid; wherein one or more computer systems of a customer is coupled to the request manager

and include one or more processors; a memory coupled to at least the one processor; and, a

scheduling manager residing in the memory and executable by the at least the one processor,

comprising the steps of:

defining a respective valuation of each of a plurality of work items to be processed by

one or more data processing systems (i.e., deadline and budget constrained scheduling for

allocating resources to application jobs in such a way that the users' requirements are met… see

page 1, lines 6-21, Buyya);

comparing the respective valuation of each respective said work item to a respective cost

of accessing additional computer resources necessary to process the work item (i.e., mapping

Gridlets to resources depending on the user requirements such as deadline and budget limits and

optimization strategy cost, cost time, time or time variant… see section 2.1, page 2, and see

also step 4e, page 4, Buyya); and

dynamically managing the access of additional computer resources by respective ones of

the work items if the respective valuation of each of the work items exceeds the respective cost

of accessing additional computer resources necessary, to process corresponding ones of the

work items (i.e., the scheduling flow manager selects an appropriate scheduling algorithm for

mapping Gridlets to resources depending on the user requirements such as deadline and budget

limits and optimization strategy cost, cost time, time or time variant… see section 2.1, page 2,

Buyya).

Regarding claim 23, Thompson discloses a method of providing fee-based processing for

programs in a processor system, whereby fees are based on utilization of computer resources for

completing processing a program, the processor system including at least one processor; a

memory coupled to the at least one processor, and a scheduling manager residing in the

memory, the method comprising the steps of:

defining a respective valuation of each of a plurality of programs to be processed (i.e.,

deadline and budget constrained scheduling for allocating resources to application jobs in such a

way that the users' requirements are met… see page 1, lines 6-21, Buyya);

comparing the respective valuation of each respective said program to a respective

projected fee for utilization of computer resources to process said program (i.e., mapping

Gridlets to resources depending on the user requirements such as deadline and budget limits and

optimization strategy cost, cost time, time or time variant… see section 2.1, page 2, and see

also step 4e, page 4, Buyya);

dynamically managing the access of computer resources to be applied to a program based

on the respective valuation of a program that is to be processed (i.e., the scheduling flow

manager selects an appropriate scheduling algorithm for mapping Gridlets to resources

depending on the user requirements such as deadline and budget limits and optimization; and

assessing a fee for the dynamically determined managed access of computer resources to

be used (i.e., the scheduling flow manager selects an appropriate scheduling algorithm for

mapping Gridlets to resources depending on the user requirements such as deadline and budget

limits and optimization, see page 2, section 2.1, step 3, Buyya).

Regarding claims 7, 21 and 24, all the limitations of these claims have been noted in the

rejection of claims 6, 20 and 23 above, respectively. In addition, Buyya discloses: wherein the

scheduling manager applies a valuation heuristic to each work item (i.e., scheduling flow

manager backed with scheduling heuristics, cost and cost-time support deadline, see page 3,

section 2.2, Buyya) .

Regarding claims 8, 22 and 25, all the limitations of these claims have been noted in the

rejection of claims 6, 20 and 24 above, respectively. In addition, Buyya discloses: further

comprising applying a priority algorithm for preventing starvation of computer resources to

those work items which have been delayed, whereby the processing of all the work items in a

program is completed (i.e., scheduling algorithm in sections 2.1 and 2.2, page 2 and 3, Buyya).

Regarding claim 9, all the limitations of this claim have been noted in the rejection of

claim 7 above. In addition, Buyya discloses: wherein the priority algorithm increases respective

valuations of delayed work items so as to complete processing of each of the work items prior

to or at a cut-off processing date of the work item (i.e., when the deadline is tight, there is high

demand for all the resources in short time, the impact of cost and cost-time scheduling strategies

on the completion time is similar as all the resources are used up as long as budget is available

to process all jobs within the deadline and when the deadline is relaxed, it is likely that all jobs

can be completed using the first few cheapest resources to completed the job earlier than the

cost optimization scheduling, the using cost and cost-time optimization scheduling, see section

3 and 3.3, Buyya).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CINDY NGUYEN whose telephone number is (571)272-4025. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cindy Nguyen
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Examiner, Art Unit 2161

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161